

## **CALFED's Delta Conveyance Strategy for Common Response 16**

CALFED's strategy is to develop a through-Delta conveyance alternative based on the existing Delta configuration with some modifications, evaluate its effectiveness, and add additional conveyance and/or other water management actions if necessary to achieve CALFED goals and objectives. The initial through-Delta conveyance will be continually monitored, analyzed, and improved to maximize the potential of the through-Delta approach to meet CALFED goals and objectives, consistent with the CALFED Solution Principles. If the through-Delta conveyance fails to meet the CALFED goals and objectives, there will be a reassessment of the reasons and the need for additional Delta conveyance and/or water management actions.

Because of the many complex interactions within the Bay-Delta system, successfully implementing a through-Delta strategy requires careful balancing of actions to address a wide range of concerns, including water quality, flood control, fisheries, water levels, circulation patterns, channel scour and sediment deposition. Actions which improve water quality and flow direction in one region of concern, for example, may in turn create adverse impacts elsewhere. The understanding of these complex hydrodynamic, biological, and chemical interactions is still incomplete so it will be necessary to approach the optimization of CALFED's strategy with a high degree of cooperation, rigorous monitoring, scientific analysis, and an open-minded approach to solution options. It will also be essential that the implementation of proposed solution actions be linked so that the appropriate balance of benefits and impacts is maintained throughout the implementation period.

As noted above, CALFED has identified two factors, export water quality and diversion effects on fisheries, as especially important for evaluating the effectiveness of the CALFED conveyance alternative. These and other factors will be continually reevaluated during Stage 1 as part of the adaptive management process. Under the Preferred Program Alternative, some additional actions may be taken to enhance the through-Delta alternative.

As part of the Preferred Program Alternative, CALFED will study and evaluate a screened diversion structure on the Sacramento River at Hood with a range of diversion capacities up to 4,000 cfs as a measure to improve drinking water quality in the event that the Water Quality Program measures do not result in adequate improvements toward CALFED drinking water quality goals. The CALFED Program has committed to a target for drinking water quality of either average concentrations at the south and central Delta drinking water intakes of 50 ug/L bromide and 3.0 mg/L total organic carbon or an equivalent level of public health protection using a cost effective combination of alternative source waters, source control, and treatment technologies. The Hood diversion facility is being evaluated as part of the Preferred Program Alternative because of concerns that increased closures of the Delta Cross Channel for fish protection will have adverse impacts on water quality in the central and south Delta. Modeling performed during evaluation of CALFED alternatives suggests that fish friendly reoperation of the Delta Cross Channel may result in increases in total dissolved solids and in total bromides. The Hood diversion site was chosen because it provides a good balance of physical features which minimizes effects on delta smelt migration, reduces diversion of sediment from the river, and reduces tidal influences on fish screen effectiveness, while providing topographic and geologic conditions that would allow a diversion structure to be constructed near sea level, on

mineral soils, and through mostly agricultural lands. The Hood diversion would likely include a fish screen, pumps, and a channel between the Sacramento and Mokelumne Rivers.

Serious Fishery concerns exist about a Hood diversion, even as a contingent action. These concerns center on possible disruption to migration patterns of salmon, smelt, splittail sturgeon, steelhead, other native fish and striped bass. Although a screened diversion on the Sacramento River would keep out-migrating salmon, in the Sacramento River, flows from the Sacramento into the Mokelumne system may attract adult returning salmon to the downstream side of the screens. This "back of the screen" phenomenon could result in stranding or potential increased mortality associated with a fish passage structure. More broadly, the concern exists that the negative fisheries impacts associated with the Hood diversion may actually be greater than the positive benefits associated with the Delta Cross Channel closure that may produce the water quality degradation. As a result, we have structured the potential Hood diversion as a contingent action to be considered only after three separate assessments are satisfactorily completed: first, a thorough assessment of Delta Cross Channel operation strategies, and confirmation of continued concern over water quality impacts from Delta Cross Channel operations; second, a thorough evaluation of the technical viability of a Hood diversion facility; and third, satisfactory resolution of the fisheries impacts concerns described above. We anticipate that these three assessments will be shared with the Delta Drinking Water Council or its successor and the expert panel evaluating fish impacts of Delta conveyance.

A Hood diversion, if ultimately constructed, would be located in the same corridor that has been identified as the best route for an isolated facility. This suggests that the design of the Hood diversion should be compatible with a future isolated facility, should an isolated facility be required in the future. It is important to reiterate that an isolated facility is not part of the CALFED Preferred Program Alternative.

Other actions to enhance the CALFED conveyance strategy, such that CALFED goals and objectives could be achieved, would require consideration of a variety of alternatives and evaluation of available new information. This evaluation would take place in a supplemental programmatic evaluation focused on the goals and objectives that have not been achieved in addition to project-level evaluations. For example, if ongoing evaluation indicates that CALFED is not achieving its goals and objectives using the through-Delta alternative, supplemental programmatic evaluation of a number of water management options, including an isolated conveyance facility, would be conducted and a decision made based on this evaluation.

CALFED recognizes the need to develop solutions to the conveyance issues that provide appropriate balance in meeting all of CALFED's goals and objectives. CALFED believes that benefits to water quality and water supply reliability gained by conveyance improvements in Stage 1 and beyond must be shared between both consumptive and environmental water uses. Defining how the benefits are shared for particular projects will be determined during the implementation process.

## South Delta Conveyance

The Preferred Program Alternative employs a through-Delta approach to conveyance. Modifications in Delta conveyance will result in improved water supply reliability, protection and improvement of Delta water quality, improvements in ecosystem health, and reduced risk of supply disruption due to catastrophic breaching of Delta levees. The proposed through-Delta conveyance facility actions include:

- Construction of a new screened intake at Clifton Court Forebay with protective screening criteria.
- Construction of either a new screened diversion at Tracy with protective screening criteria and/or an expansion of the new diversion at Clifton Court Forebay to meet the Tracy Pumping Plant export capacity.
- Implementation of the Joint Point of Diversion for the SWP and CVP, and construction of interties.
- Construction of an operable barrier at the head of Old River to improve conditions for salmon migrating up and down the San Joaquin River.
- Implement actions to improve water supply and water quality for agricultural diverters within the south Delta, and improving the aquatic resources in the lower San Joaquin River and south Delta. Actions may include channel dredging, extension and screening of agricultural intakes, construction and operation of operable barriers, and levee setbacks and levee improvements. Actions will be staged, with appropriate monitoring and testing to guide the implementation process.
- ~~Construction of operable barriers taking into account fisheries, water quality, and water stage needs in the south Delta.~~
- Operational changes to the SWP operating rules to allow export pumping up to the current physical capacity of the SWP export facilities.
- Study and evaluate a screened diversion structure on the Sacramento River at Hood with a range of diversion capacities up to 4,000 cfs as a measure to improve drinking water quality in the event that the Water Quality Program measures do not result in continuous improvements toward CALFED drinking water goals. The Hood diversion would likely include a fish screen, pumps, and a channel between the Sacramento and Mokelumne Rivers. The Hood diversion is a contingent action to be considered only after three separate assessments are satisfactorily completed: first, a thorough assessment of Delta Cross Channel operation strategies, and confirmation of continued concern over water quality impacts from Delta Cross Channel operations; second, a thorough evaluation of the technical viability of a Hood diversion facility; and third, satisfactory resolution of the substantial fisheries concerns about a diversion facility. The results of these evaluations will be shared with the Delta Drinking Water Council or its successor and the expert panel evaluating fish impacts of Delta conveyance. If these evaluations demonstrate that a Hood diversion facility is necessary to address drinking water quality concerns and can be constructed without adversely affecting fish populations, it will be constructed as a part of the Preferred Program Alternative in Stage II.
- Construct new setback levees; dredge and/or improve existing levees along the channels of the lower Mokelumne River system from Interstate 5 downstream to the San Joaquin River.
- The Preferred Program Alternative also includes a process for determining the conditions

under which any additional conveyance facilities and/or other water management actions would be taken in the future. The process would include:

- An evaluation of how water suppliers can best provide a level of public health protection equivalent to Delta source water quality of 50 ppb bromide and 3 ppm TOC.
- An evaluation based on two independent expert panels' reports—one on CALFED's progress toward these measurable water quality goals and the second on CALFED's progress toward ecosystem restoration objectives, with particular emphasis on fisheries recovery.